THE EFFECT OF BEE PROPOLIS ON FOLLICLE NUMBER IN FEMALE MICE (*Mus musculus*) INDUCED BY LEAD ACETATE [$Pb(C_2H_3O_2)_2$]

Rimas Prathita Agustin

ABSTRACT

This study was aimed to investigate the effect of bee propolis that is manufactured by CC Pollen Co. USA imported and distributed by PT. Harmoni Dinamik Indonesia on follicle number in female mice (*Mus musculus*) induced by lead acetate [$Pb(C_2H_3O_2)_2$] 10 mg/kg bw per-oral. Twenty-five BALB/C mice were randomly divided into five groups. C (-) was negative control group that received only CMC Na 1%, C (+) was positive control group that received lead acetate 10 mg/kg bw for 10 days, T (1) was treatment group that received lead acetate 10 mg/kg bw for 10 days and continued received 200 mg/kg bw of bee propolis per-oral for 10 days, T (2) was treatment group that received lead acetate 10 mg/kg bw for 10 days and continued received 400 mg/kg bw of bee propolis per-oral for 10 days, T (3) was treatment group that received lead acetate 10 mg/kg bw for 10 days and continued received 800 mg/kg bw of bee propolis per-oral for 10 days. The treatment was conducted for 7 days of adaptation and 20 days of total treatments. At the end of the research, all mice were sacrificed and ovaries were collected separately. Ovaries tissues were processed using Hematoxylin-Eosin staining. The result shows that between C (-) and C (+), there is decrement of ovarian follicles in group C (+), for primary follicle of C (-) is $21.00^{ab} \pm 1.000$; C (+) is $15.20^{d} \pm 1.643$, and then in treatment groups shows that bee propolis can maintain the number of ovarian follicle such as primary, secondary and tertiary follicle. The best dose in this research is 800 mg/kg bw that was in treatment group 3.

Key words : bee propolis, lead acetate, reactive oxygen species, free radical, ovary